217/782-2113

CONSTRUCTION PERMIT
PREVENTION OF SIGNIFICANT DETERIORATION APPROVAL

PERMITTEE

KIK Custom Products, Inc.
Attn: Harry Tourville
1 West Hegeler Lane
Danville, Illinois 61832

Application No.: 05020038 I.D. No.: 183804AAC
Applicant's Designation: Date Received: February 14, 2005
Subject: Three new aerosol can filling lines
Date Issued: December 8, 2005
Location: 1 West Hegeler Lane, Danville

Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission source(s) and/or air pollution control equipment consisting of three new aerosol filling lines and additional compounding support equipment as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

In conjunction with this permit, approval is given with respect to the Prevention of Significant Deterioration of Air Quality Regulations (PSD) for the above referenced project, in that the Illinois Environmental Protection Agency (Agency) finds that the application fulfills all applicable requirements of 40 CFR 52.21. This approval is issued pursuant to the Clean Air Act, as amended, 42 U.S.C. 7401 et. seq., the Federal regulations promulgated there under at 40 CFR 52.21 for Prevention of Significant Deterioration of Air Quality (PSD), and a Delegation of Authority agreement between the United States Environmental Protection Agency and the Illinois EPA for the administration of the PSD Program. This approval becomes effective in accordance with the provisions of 40 CFR 124.15 and may be appealed in accordance with the provisions of 40 CFR 124.19. This approval is also based upon and subject to the following findings and the conditions, which follow:

Findings

1. KIK Custom Products, Inc, (KIK) has requested a permit for three new aerosol can filling lines and additional support equipment at its manufacturing plant located in Danville. At this plant, KIK prepares and packages liquid and aerosol personal care and household cleaning products.

2. Danville is located in Vermillion County, which is designated attainment for all criteria pollutants. The County has a Class II designation for Prevention of Significant Deterioration (PSD) permit review.

3a. The proposed project will have potential emissions of 157 tons/year of volatile organic material (VOM). The project is therefore subject to PSD review as a major modification of an existing major source for VOM emissions, because it will emit more than 40 tons/year.

b. The project is not subject to PSD for other PSD pollutants, for which the potential increases in emissions are not significant.

4. After reviewing all the materials submitted by KIK, the Illinois EPA has determined that the project, as proposed, would (i) be in compliance with applicable Illinois Pollution Control Board emission standards and (ii) utilize Best Available Control Technology (BACT).

5. The Illinois EPA has determined that the project, as proposed, would comply with applicable Illinois Air Pollution Control Regulations and the federal rules for Prevention of Significant Deterioration of Air Quality (PSD), 40 CFR 52.21.

6. A copy of the application and the Illinois EPA's formal review of the application and a draft of this permit were placed in a location in the vicinity of the project, and the public was given notice and an opportunity to examine this material and to submit comments and to request a public hearing on this matter.

The Illinois EPA is issuing this approval subject to the following conditions and consistent with the specifications and data included in the application. Any departure from the conditions of this approval or terms expressed in the application would need to receive prior written authorization by Illinois EPA.

1.0 Unit Specific Conditions

1.1 Three Aerosol Can Filling Line

1.1.1 Description

The three new lines will be used to package personal care products using both controlled under-the-cup (UTC) for amenable products and through-the-valve (TTV) technology to fill aerosol cans with organic propellant. Cans are first filled with the appropriate amount of a desired product, which is referred to as "concentrate". The appropriate amount of propellant is then added to the can. The propellant is composed of organic compounds, like propane and butane and HCFCS such as 1,1-difluoroethane(HCFC-152a), which is not classified as either VOM or an ozone depleting substance that exist as gases at normal conditions but can be readily liquefied with pressure. In UTC filling, the filling equipment lifts the uncrimped valve cup assembly and injects propellant beneath the valve cup. In the TTV filling, the propellant is injected directly into a sealed

can by forcing propellant batch through the valve steam in the valve cup assembly.

Each line will be equipped with separate rotary assemblies for both UTC and TTV filling "gassers". The UTC assembly will be connected to a solvent reclaim system and flare for control of excess propellant from amenable products (i.e., those products that do not contain HCFC-152a or cannot technically be filled using controlled UTC), which would otherwise be lost to the atmosphere as VOM emissions. This will enable UTC filling to be accomplished with a VOM emission rate that is similar to the VOM emission rate achieved with TTV filling.

1.1.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Control Equipment
Line 16	Aerosol Can Filling	Flare
Line 17	Aerosol Can Filling	
Line 18	Aerosol Can Filling	

1.1.3 Applicability Provisions and Applicable Regulations

a. The "affected filling units" for the purpose of theses unit specific conditions, are the aerosol can filling lines, as described in Conditions 1.1.1 and 1.1.2.

b. The affected filling units are subject to 35 IAC 212.321, which provides that, no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in 35 IAC 212.321(c). [35 IAC 212.321(a)].

c. The affected filling units are subject to 35 IAC 215.301, which provides that no person shall cause or allow the discharge of more than 3.6 kg/hr (8 lb/hr) of organic material (OM) into the atmosphere from any emission unit, except as provided in 35 IAC 215.302 and with the following exception: if no odor nuisance exists the limitation shall apply only to photochemically reactive.

1.1.4 Work Practice Requirements

a. Total number of cans processed in the affected filling units shall not exceed 33 million cans/month and 200 million cans/year.

b. At all times, the Permittee shall maintain and operate the affected filling units, in a manner consistent with good air pollution control practice for minimizing emissions.

c. The Permittee shall verify proper filling of cans with a VOM monitoring system in the gashouse. This system may monitor VOM concentration as a percentage of the lower explosive limit.

d. The flare system associated with UTC filling shall be operated to comply with applicable requirements of 40 CFR 60.18.

1.1.5 BACT Requirements

a. i. The affected filling units shall be equipped, operated and maintained with through the valve(TTV) filling method or under the cup(UTC) filling method (controlled by a solvent reclaim system and flare), when TTV cannot be utilized.

ii. Emissions of VOM from adding propellant cans on each affected filling unit shall not exceed 0.001 lb of VOM per can filled, on a three hour average.

The above requirements for emission of VOM represent the application of the Best Available Control Technology (BACT) as required by Section 165 of the Clean Air Act.

1.1.6 Emission Limitation

a. Emissions from the affected filling units shall not exceed 12.6 tons/month and 75.6 tons/year.

b. Compliance with annual limits shall be determined from a running total of 12 months of data.

1.1.7 Testing Requirements

a. Upon request by the Illinois EPA the Permittee shall at his own expense, conduct stack test for VOM emissions from the affected filling unit(s).

b. i. These tests shall be conducted in accordance with the applicable test methods and procedures as identified below.

Location of Sample Points	USEPA Method 1
Gas Flow and Velocity	USEPA Method 2
Flue Gas Weight	USEPA Method 3
Volatile Organic Material	USEPA Method 18

ii. If the affected filling units are not equipped with permanent total enclosure. Capture efficiency shall be determined using the methodology specified in 35 IAC Part 218, Subpart T.

c. The Illinois EPA shall be notified prior to these tests to enable the Illinois EPA to observe these tests. Notification of the expected date of testing shall be submitted a minimum of 30 days prior to the expected date. Notification of the actual date and expected time of testing shall be submitted a minimum of 5 working days prior to the actual date of the test. The Illinois EPA may at its discretion accept notifications with shorter advance notice provided that the Illinois EPA will not accept such notifications if it interferes with the Illinois EPA's ability to observe testing.

d. At least 60 days prior to the actual date of testing, a written test plan shall be submitted to the Illinois EPA for review. This plan shall describe the specific procedures for testing, including as a minimum:

i. The person(s) who will be performing sampling and analysis and their experience with similar tests.

ii. The specific conditions under which testing will be performed, including a discussion of why these conditions will be representative of maximum emissions and the means by which the operating parameters for the emission unit and any control equipment will be determined.

iii. The specific determinations of emissions and operation, which are intended to be made, including sampling and monitoring locations.

iv. The test method(s) that will be used, with the specific analysis method, if the method can be used with different analysis methods.

v. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with justification.

e. Copies of the Final Reports(s) for these tests shall be submitted to the Illinois EPA within 14 days after the test results are compiled and finalized. The Final Report shall include as a minimum:

i. A summary of results.

ii. General information.

iii. Description of test method(s), including description of sample points sampling train, analysis equipment, and test schedule.

iv. Detailed description of test conditions, including:

A. Process information, e.g., equipment mode and propellant feed rate.

B. Control equipment information, i.e., equipment condition and operating parameters during testing.

v. Data and calculations, including copies of all raw data sheets and records of laboratory analyses, sample calculations, and data on equipment calibration.

1.1.8 Recordkeeping Requirements

a. The Permittee shall keep a file containing the VOM emissions factors used for filling cans with aerosol propellant, with supporting calculation and documentation.

b. The Permittee shall keep records of the following for the affected filling units:

i. Total number of cans processed on the affected filling units (cans/month and cans/year).

ii. Number of cans of processed by type of fill method on the affected filling units(cans/month and cans/year).

iii. Total amount of VOM containing material used for the composition of can products (tons/month and tons/year).

c. The Permittee shall keep records of the VOM emissions from the affected lines in tons/month and tons/year, with all supporting calculations.

1.1.9 Reporting Requirements

a. The Permittee shall promptly notify the Illinois EPA of deviations of the affected filling units with the permit requirements as follows. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

1.2 Support Equipment

1.2.1 Description

The support equipment consists of the equipment used in the production of concentrate, ancillary equipment associated with the affected filling units and a system for puncturing reject cans.

The compounding equipment consists of mixing tanks, premix tanks and run tanks. The VOM emissions of these operations controlled by various work practices.

1.2.2 List of Emission Units and Air Pollution Control Equipment

Operation	Emission Unit Description	Control Equipment
Can Puncture Operation	Process reject cans to remove propellant	None
Storage	Ethanol Storage Tanks	
Propellant handling	Booster Pumps	
	Pipe Disconnects/Propellant Changeovers	
Concentrate Production	Compounding Equipment	
Concentrate Handling	Concentrate Day Tanks, capacity less than 15,000 gallons each	
	Concentrate Filling	
	Ethanol Flushing/Washing	
Testing	Spray Testing	

1.2.3 Applicability Provisions and Applicable Regulations

a. The "affected units" for the purpose of these unit specific conditions, are the operation and equipment described in Condition 1.2.1 and 1.2.2.

b. The affected units are subject to 35 IAC 212.321, which provides that, No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.321 [35 IAC 212.321(a)].

c. The affected units are subject to 35 IAC 215.301, which provides that no person shall cause or allow the discharge of more than 3.6 kg/hr (8 lb/hr) of organic material into the atmosphere from any emission unit, except as provided in 35 IAC 215.302 and with the following exception: if no odor nuisance exists the limitation shall apply only to photochemically reactive as defined in 35 IAC 211.4690.

1.2.4 Operational Limitations

a. At all times, the Permittee shall maintain and operate the affected units, in a manner consistent with good air pollution control practice for minimizing emissions.

b. The maximum throughput of VOM contained in the concentrate (i.e., material other than propellant introduced into cans) for the affected filling units shall not exceed a total of 11,000 ton/month and 66,000 tons/year.

1.2.5 BACT Requirements

a. The total amount of reject cans from the affected filling units processed by the can puncture operations shall not exceed 0.2 percent of total production, on those unit, determined on a quarterly basis.

b. Emissions of VOM from the concentrate filling in the affected lines shall not exceed 1.76 lb of VOM per

1000 gallons of concentrate, determined on a quarterly basis.

c. For the booster pumps, the Permittee shall implement work practices to prevent leaks from a pump, meaning a loss of VOM from the pump above background levels.

d. For the Compounding shall be conducted in either closed vessels or vessels with lids to minimize loss of VOM to the atmosphere.

e. Flushing/washing operation shall be conducted to record washing solvent for reuse or disposal.

f. Propellant shall be handled with quick disconnect fitting that minimize loss of propellant to the atmosphere during disconnects ad changeovers.

The above requirements for emissions of VOM represent the application of the Best Available Control Technology (BACT) as required by Section 165 of the Clean Air Act.

1.2.6 Emission Limitation

a. Emissions from the affected units shall not exceed the following limits:

Point of Emissions	VOM emissions (Tons/Month)	(Tons/Year)
Can Puncture Operation	8.0	46.7
Organic liquid Storage Tanks	0.3	1.8
Pipe Disconnects/Propellant Changeovers	0.2	1.2
Compounding	0.6	3.6
Concentrate Day Tanks	0.3	1.8
Concentrate Filling	3.0	17.4
Spray Testing	1.5	8.7
Total Emission:	---	81.2

b. This permit is issued based on minimal emissions of VOM from the booster pumps. For this purpose, VOM emissions shall not exceed 0.44 tons/year.

c. Compliance with annual limits shall be determined from a running total of 12 months of data.

1.2.7 Testing Requirements

a. Upon request by the Illinois EPA the Permittee shall at his own expense, conduct stack test for VOM emission from the affected unit(s).

b. i. These test shall be conducted in accordance with the applicable test methods and procedures as identified below.

Location of Sample Points	USEPA Method 1
Gas Flow and Velocity	USEPA Method 2
Flue Gas Weight	USEPA Method 3
Volatile Organic Material	USEPA Method 18

ii. If an affected unit is not equipped with permanent total enclosure, capture efficiency shall be determined using the methodology specified in 35 IAC Part 218, subpart T.

c. The Illinois EPA shall be notified prior to these tests to enable the Illinois EPA to observe these tests. Notification of the expected date of testing shall be submitted a minimum of 30 days prior to the expected date. Notification of the actual date and expected time of testing shall be submitted a minimum of 5 working days prior to the actual date of the test. The Illinois EPA may at its discretion accept notifications with shorter advance notice provided that the Illinois EPA will not accept such notifications if it interferes with the Illinois EPA's ability to observe testing.

d. At least 60 days prior to the actual date of testing, a written test plan shall be submitted to the Illinois EPA for review. This plan shall describe the specific procedures for testing, including as a minimum:

i. The person(s) who will be performing sampling and analysis and their experience with similar tests.

ii. The specific conditions under which testing will be performed, including a discussion of why these conditions will be representative of maximum emissions and the means by which the operating parameters for the emission unit and any control equipment will be determined.

iii. The specific determinations of emissions and operation, which are intended to be made, including sampling and monitoring locations.

iv. The test method(s) that will be used, with the specific analysis method, if the method can be used with different analysis methods.

v. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with justification.

e. Copies of the Final Reports(s) for these tests shall be submitted to the Illinois EPA within 14 days after the test results are compiled and finalized. The Final Report shall include as a minimum:

i. A summary of results.

ii. General information.

iii. Description of test method(s), including description of sample points sampling train, analysis equipment, and test schedule.

iv. Detailed description of test conditions, including:

A. Process information, e.g., equipment mode and propellant feed rate.

B. Control equipment information, i.e., equipment condition and operating parameters during testing.

v. Data and calculations, including copies of all raw data sheets and records of laboratory analyses, sample calculations, and data on equipment calibration.

1.2.8 Recordkeeping Requirements

a. The Permittee shall keep a file containing the VOM emissions factors used for each affected unit, with supporting calculation and documentation.

b. The Permittee shall keep records of the followings for the affected units.

i. Throughput of VOM in solvent storage tanks (gal/month and gal/year, by type).

ii. The Total amount of VOM containing material used in concentrate. (tons/month and tons/year).

iii. Total amount of VOM (gallons/month and gallons/year) used in the flushing operation, and the amount of VOM in spent flushing material if VOM emissions are being determined as the difference between flushing solvent received and flushing solvent sent off-site for disposal.

iv. Number of cans removed for spray testing purposes per month and year.

v. Number of cans with propellant rejected for the affected lines (cans/month and cans/year by class).

c. The Permittee shall keep the following logs of inspection and maintenance for various categories of the affected units.

d. The Permittee shall keep the following records related to VOM emissions:

i. Factors used to determine emissions, with supporting documentation.

ii. VOM emissions from the affected units in tons/month and tons/year, with all supporting calculations.

1.2.9 Reporting Requirements

a. The Permittee shall promptly notify the Illinois EPA of deviations of the affected units with the permit requirements as follows. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

1.2.10 Compliance Procedures

a. Compliance with Condition 1.1.6 shall be based on the recordkeeping required by Condition 1.1.8 and the following:

i. For the solvent storage tank, compounding and concentrate day tanks USEPA methodology such as the current version of the TANKS program is acceptable.

ii. For flushing/washing by flushing material usage and appropriate engineering calculation, or by material balance as the difference between flushing material used and the VOM in spent flushing material sent off-site for disposal.

iii. Until other factors are established based on engineering analysis of operation, the emissions of the following operations shall be calculated using the emission factors contained in the application, as follows:

Operation	**Emission Factor**
Concentrate Filing	0.00176 lb/gallon
Spray Testing	0.88 lb/can tested
Reject Cans/Can Puncture	0.233 lb/reject can

These emission factors are based worst-case scenarios, except for the concentrate filling, which is based on USEPA's AP-42 factors.

2.0 The Permittee shall retain records and logs required by this permit shall be retained at a readily accessible location at the source for at least five years from the date of entry and shall be made available for inspection and copying by the Illinois EPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA request for records during the course of a source inspection.

2.1 Two copies of required reports and notifications concerning emissions equipment operation or performance testing shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276
Telephone: 217/782-5811 Facsimile: 217/524-4710

and one copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
2009 Mall Street
Collinsville, Illinois 62234
Telephone: 618/346-5120 Facsimile: 618/346-5155

3.0a Pursuant to 40 CFR 52.21(r)(2), initial construction shall commence within 18 months of the date, which this PSD Construction Permit becomes effective.

b. If construction of the lines is schedule in different phases, phase II must commence construction within 18 months of phase I and phase III within 18 months of phase II. i.e., the completion date for Phase I is the startup date of the first aerosol filling line with the TTV filling and controlled UTC.

c. This 18-month period may be extended by the Illinois EPA upon request by the Permittee if additional justified time is needed to continue the construction of the affected lines.

3.1. The Permittee is allowed to operate under this construction permit until its CAAPP Permit is next reissued, provided testing of VOM emissions is promptly conducted by the Illinois EPA Pursuant to Condition 1.1.7 or 1.2.7.

If you have any questions on this, please call Ricardo Ng at 217/782-2113.

Donald E. Sutton, P.E.
Manager, Permit Section
Division of Air Pollution Control

DES:RNG:psj

cc: Region 3